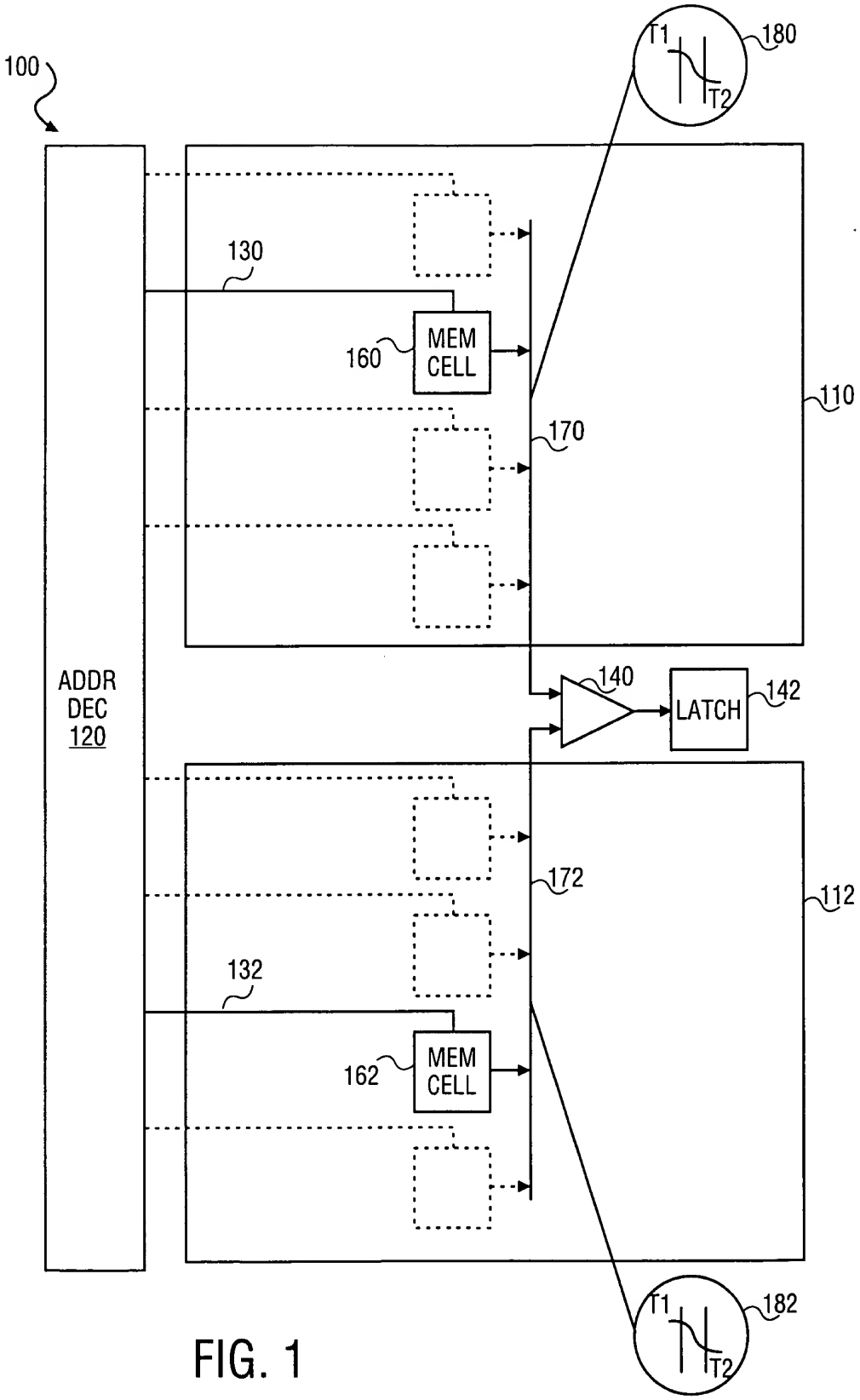
100
T1
T2
180
130
160
MEM CELL
110
170
ADDR DEC 120
140
LATCH
142
172
112
132
162
MEM CELL
T1
T2
182

FIG. 1

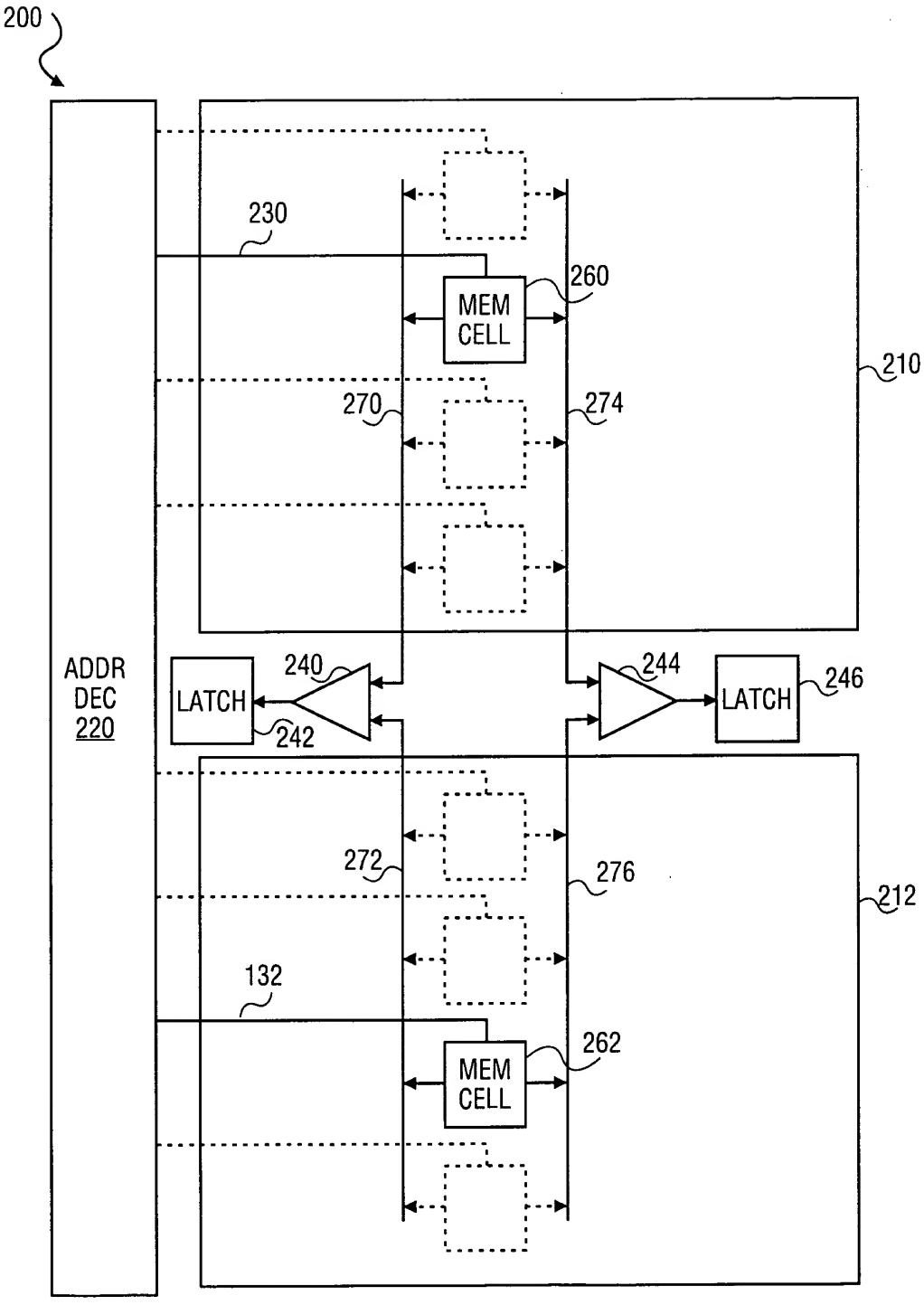
200
230
260
MEM CELL
210
270
274
ADDR DEC 220
LATCH
240
242
244
LATCH
246
272
276
212
132
262
MEM CELL

FIG. 2

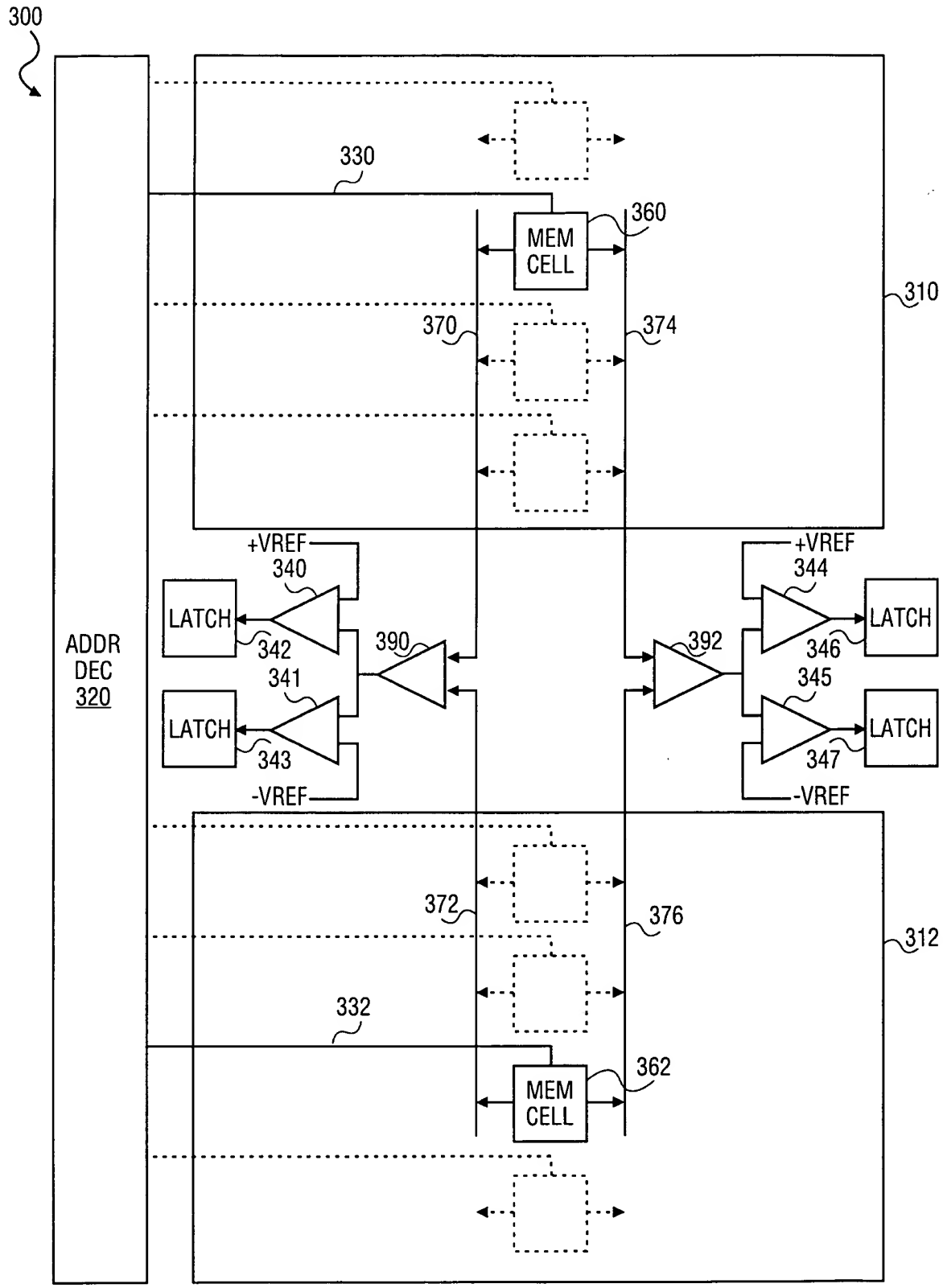
300
330
360
MEM CELL
310
370
374
+VREF
340
LATCH
342
341
LATCH
343
-VREF
390
392
+VREF
344
LATCH
346
345
LATCH
347
-VREF
ADDR DEC 320
372
376
312
332
362
MEM CELL

FIG. 3

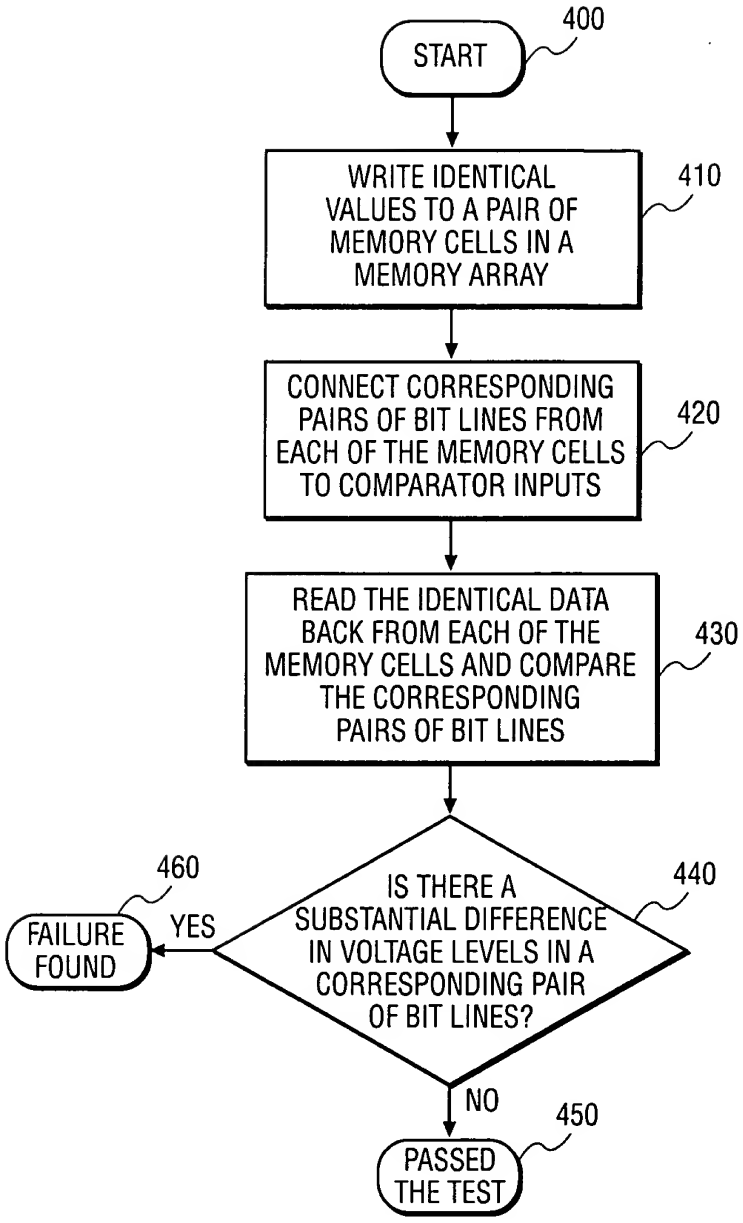
400
START
WRITE IDENTICAL VALUES TO A PAIR OF MEMORY CELLS IN A MEMORY ARRAY
410
CONNECT CORRESPONDING PAIRS OF BIT LINES FROM EACH OF THE MEMORY CELLS TO COMPARATOR INPUTS
420
READ THE IDENTICAL DATA BACK FROM EACH OF THE MEMORY CELLS AND COMPARE THE CORRESPONDING PAIRS OF BIT LINES
430
IS THERE A SUBSTANTIAL DIFFERENCE IN VOLTAGE LEVELS IN A CORRESPONDING PAIR OF BIT LINES?
440
460
FAILURE FOUND
YES
NO
450
PASSED THE TEST

FIG. 4

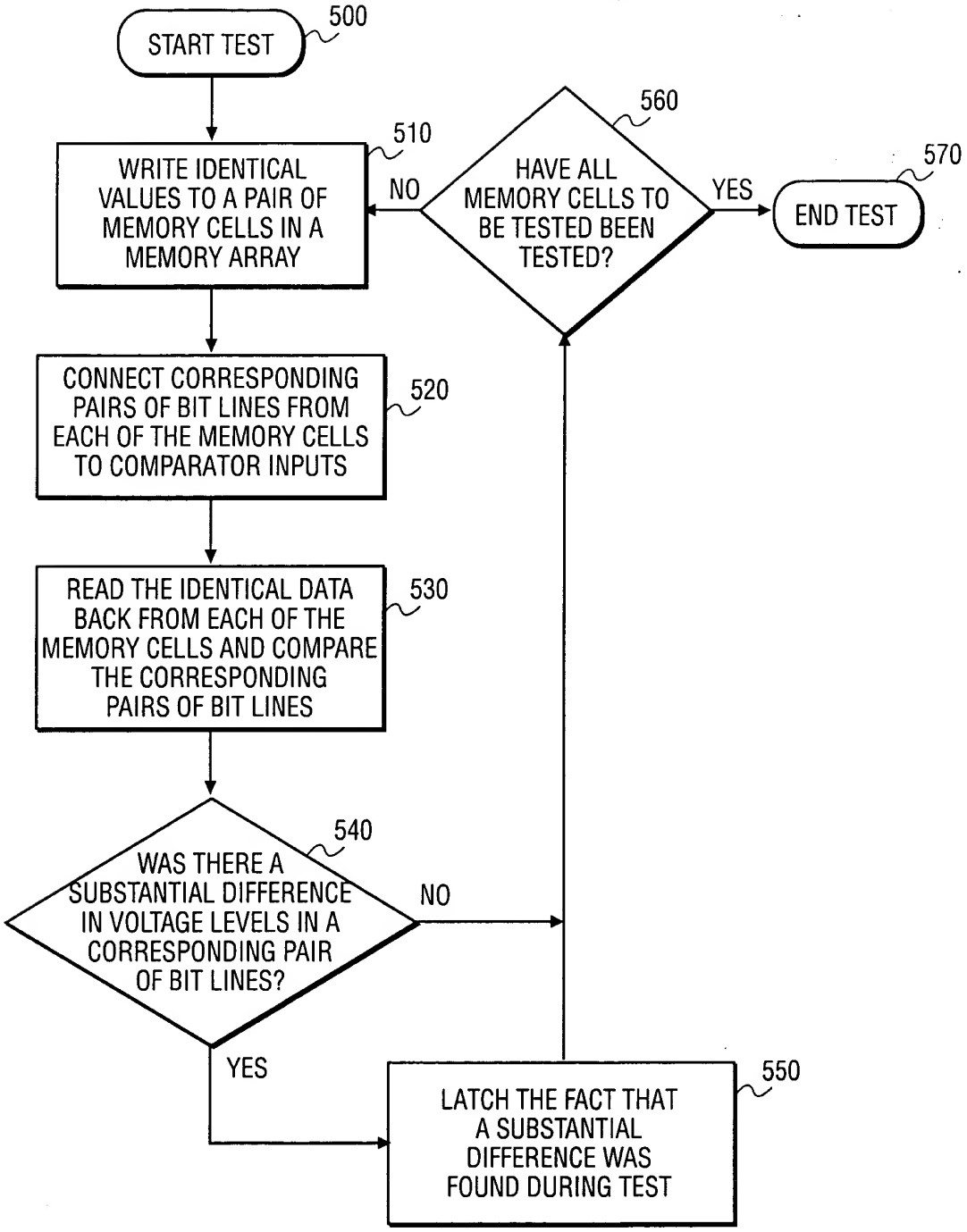
START TEST
500
WRITE IDENTICAL VALUES TO A PAIR OF MEMORY CELLS IN A MEMORY ARRAY
510
CONNECT CORRESPONDING PAIRS OF BIT LINES FROM EACH OF THE MEMORY CELLS TO COMPARATOR INPUTS
520
READ THE IDENTICAL DATA BACK FROM EACH OF THE MEMORY CELLS AND COMPARE THE CORRESPONDING PAIRS OF BIT LINES
530
WAS THERE A SUBSTANTIAL DIFFERENCE IN VOLTAGE LEVELS IN A CORRESPONDING PAIR OF BIT LINES?
540
NO
YES
LATCH THE FACT THAT A SUBSTANTIAL DIFFERENCE WAS FOUND DURING TEST
550
HAVE ALL MEMORY CELLS TO BE TESTED BEEN TESTED?
560
NO
YES
END TEST
570

FIG. 5

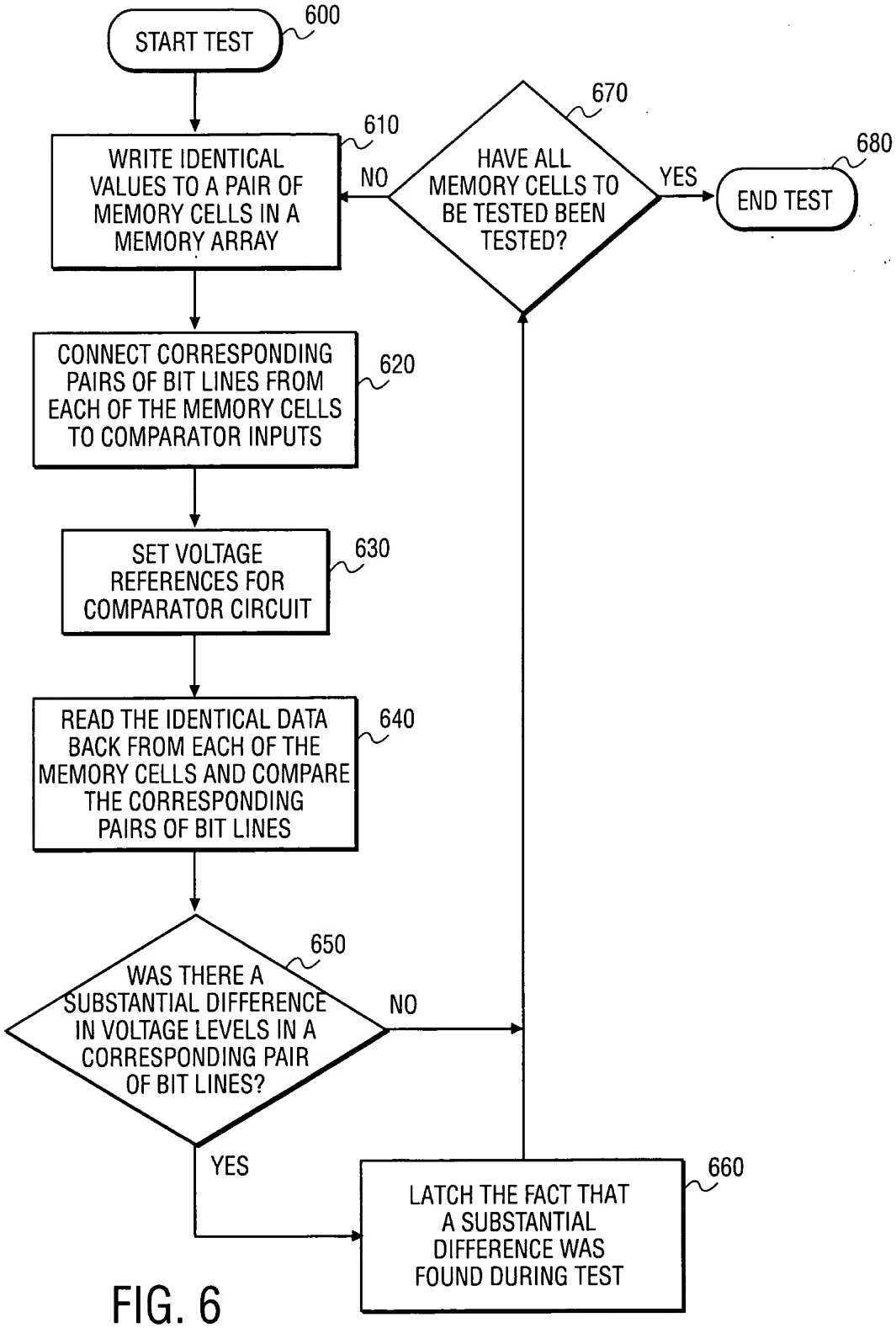
START TEST
600
WRITE IDENTICAL VALUES TO A PAIR OF MEMORY CELLS IN A MEMORY ARRAY
610
CONNECT CORRESPONDING PAIRS OF BIT LINES FROM EACH OF THE MEMORY CELLS TO COMPARATOR INPUTS
620
SET VOLTAGE REFERENCES FOR COMPARATOR CIRCUIT
630
READ THE IDENTICAL DATA BACK FROM EACH OF THE MEMORY CELLS AND COMPARE THE CORRESPONDING PAIRS OF BIT LINES
640
WAS THERE A SUBSTANTIAL DIFFERENCE IN VOLTAGE LEVELS IN A CORRESPONDING PAIR OF BIT LINES?
650
NO
YES
LATCH THE FACT THAT A SUBSTANTIAL DIFFERENCE WAS FOUND DURING TEST
660
HAVE ALL MEMORY CELLS TO BE TESTED BEEN TESTED?
670
NO
YES
END TEST
680

FIG. 6